

What is claimed is:

1. A current drive circuit comprising:

a current mirror circuit;

a current source for applying reference current input to said current mirror circuit;

5 a switch means to which output current of said current mirror circuit is applied; and

a cascode circuit for supplying the output current of said switch means as a drive current.

2. A current drive circuit comprising:

a bias generator that includes:

a first transistor in which a gate terminal and a drain terminal are connected together;

5 a second transistor in which a source terminal is connected to said drain terminal of said first transistor and a gate terminal and a drain terminal are connected together; and

a current supply that causes a reference current to flow to said second transistor; and

10 a current output unit that includes:

a third transistor in which a gate terminal is connected to said gate terminal of said first transistor;

a fourth transistor in which a gate terminal is connected to said gate terminal of said second transistor; and

15 a switch means that is provided between a drain terminal of said third transistor and a source terminal of said fourth transistor.

3. A current drive circuit according to claim 2, further comprising:  
a plurality of said current output units; and  
a plurality of terminals that are connected to each of drain terminals of said fourth transistors of said plurality of said current output units.
4. A current drive circuit according to claim 3, wherein each of said plurality of said current output units supplies as output a current that has been weighted.
5. A current drive circuit comprising:  
a plurality of current drive circuits according to claim 2; and  
a terminal that is connected to drain terminals of each of said fourth transistors of said plurality of said current drive circuits.
6. A current drive circuit according to claim 5, wherein each of said plurality of said current drive circuits supplies as output a current that has been weighted.
7. A current drive circuit according to claim 1, wherein said switch means is turned ON and OFF by a control signal.
8. A current drive circuit according to claim 2, wherein said switch means is turned ON and OFF by a control signal.
9. A current drive circuit according to claim 7, wherein said control signal is a graduation data signal of a display.

10. A current drive circuit according to claim 8, wherein said control signal is a graduation data signal of a display.

11. A current drive circuit according to claim 1, wherein said switch means is a MOS transistor.

12. A current drive circuit according to claim 2, wherein said switch means is a MOS transistor.

13. A current drive circuit according to claim 3, wherein said switch means is a switch group that includes a plurality of switch means, and said switch group decodes graduation data signals of a display.

14. A current drive circuit according to claim 5, wherein said switch means is a switch group that includes a plurality of switch means, and said switch group decodes graduation data signals of a display.

15. A current drive circuit according to claim 13, comprising a switch means that is connected to a source terminal of said third transistor.

16. A current drive circuit according to claim 14, comprising a switch means that is connected to a source terminal of said third transistor.

17. A current drive circuit according to claim 15, comprising a switch means that is connected to a source terminal of said first transistor and that is always in an ON state.

18. A current drive circuit according to claim 16, comprising a switch means that is connected to a source terminal of said first transistor and that is always in an ON state.

19. A display, comprising:  
organic EL elements that are arranged in a matrix;  
current drive circuits and scan circuits for causing drive currents to flow to said organic EL elements; and  
5 signal processing circuits for receiving image data signals as input, supplying graduation data signals to said current drive circuits, and supplying scan control signals to said scan circuits; and  
wherein said display is provided with the current drive circuit of claim 1 as said current drive circuit.

20. A display, comprising:  
organic EL elements that are arranged in a matrix;  
current drive circuits and scan circuits for causing drive currents to flow to said organic EL elements; and  
5 signal processing circuits for receiving image data signals as input, supplying graduation data signals to said current drive circuits, and supplying scan control signals to said scan circuits; and  
wherein said display is provided with the current drive circuit of claim 2 as said current drive circuit.